

Tracewell S31 for VME64x 8-slot

Description

The Tracewell S31 for VME64x delivers innovative design and performance in a low profile, cost effective 8 slot system available in standard configurations for commercial, process control and COTS/military applications. The space-saving S31 occupies only 8U of total rack space, yet is also ideal for bench-top operation. Designed using a modular concept, all major components are quickly accessible for ease of configuration and service. A front plugging service module supports power, cooling and monitoring, and a front storage module provides up to five drive bays. Advanced design and manufacturing minimizes fasteners while providing excellent EMI suppression with minimal gaskets. Tracewell's rigid steel cardcage eliminates flexing often seen in conventional extruded rail designs, while meeting all IEEE 1101.10/11 standards. The VME64x compliant 160 pin backplane is also compatible with all VME 32 and 64 bit boards and includes P0 I/O connector. System features include backplane options supporting the latest bus platforms. A standard system monitor verifies fan speed and power supply output voltage limits. The front plugging service module includes a 300W power supply and high-pressure axial fans providing distributed airflow throughout the chassis.

The S31 from Tracewell Systems is designed to offer flexibility and performance for a broad marketplace.



Features

- Compact 8U overall height
- 8-slot VME64x includes 160 pin connectors and P0
- Formed steel cardcages provide excellent rigidity without flex RPIO
- 8-slot transition rack
- Front plugging power, cooling and storage System monitor verifies output voltage and fan speed
- EMI shielded design
- Durable steel and aluminum construction

Physical

Construction:	Aluminum sheet, 5052-H32 alloy; right and left sides (.100"), top and bottom covers (.062"), rack flanges (.080"), rear panel (.062") Steel sheet, ASTM A366; front/rear upper/lower cardcages and panels (.060") Aluminum Extrusion, 6101-T6 alloy; cardcage front profile Cardguide, snap-in, .062" pcb thickness, nylon, UL 94V-2 flame rated material Cardguide entry, snap-in, .062" pcb thickness, nylon, UL 94V-0 flame rated material
Cardcage:	Front: 6U x 160mm, 8 slots, IEEE 1101.10; Rear: 6U x 80mm, 9 slots, IEEE 1101.11 compliant
Dimensions:	12.33" D (313 mm) 17.64" W (448 mm, less rack flanges) 19.00"W (483 mm, including rack flanges) 13.98"H (355mm, 8U)
Weight:	30 lbs. (13.63 kg)
Finish:	Textured paint, light gray per Sherwin Williams F63TXA9008; front upper/ lower panels, service and storage module faceplates, rack flanges, top and bottom covers; All other aluminum is brushed clear chromate per MIL-STD 5541, steel is brightzinc plate
Additional:	(2) removable rack flanges, (4) removable feet, (1) single slot filler panel installed in slot 1 both front and rear

Backplane

General:	8-slot 6U VME64x with P0
Bus Structure:	VME64x, 32/64 bit, J1/J2 monolithic
Connectors:	160 pin, 5 row, J1/J2, IEC 61076-4-113 133 pin, 7 row, J0, IEC 61076-4-101
Assembly:	SMT/ press-fit assembly
Layer count:	10 layers
Control:	System header for SYSRESET, SYSFAIL, ACFAIL, +5V and return; 5 pin MTA-100
PCB:	FR4 epoxy-glass laminate, multilayer, all-stripline, SMOBC, silkscreen on two sides, 1 oz. copper signal and power planes minimum, UL 94V-0, 0.154" (3.9 mm) thickness
Impedance:	50 Ohms, non-loaded pcb
Termination:	Passive, electrically outboard, mechanically inboard
Decoupling:	High-frequency decoupling at each slot; 0.1mF MCL ceramics (SMT) Low-frequency decoupling distributed across the backplane; 100mF Tantalum (SMT)
Rear shrouds:	Extended tails and shrouds on all J2 and J0 slots
DC distribution:	Screw terminals for +5, +3.3, return and V I/O (35A rating per terminal), 20 position ATX for +5, +3.3, +/- 12VDC, and return (9A rating per pin), .250 spade terminals for +/-12Vdc (15A rating per terminal)
Compliance:	ANSI/VITA 1.1-1997

Power *

Total output:	300 watts; maximum for all outputs combined
Input:	90 – 135/ 180 – 265VAC, user selectable
Frequency:	47 – 63 Hz
Efficiency:	> 65% nominal at full load
Input current:	6.5A at 115VAC; 3.5A at 230VAC
Inrush current:	< 80A peak at 135V cold start at 25°C
Hold-up time:	17 ms minimum after removal of power at full load at 115VAC; 20 ms at 230 VAC
DC outputs:	+5.0V/ 32A, +3.3V/ 23A, +12V/ 12A, -12V/ 1A

cont.

Output adjustability: None
Load requirement: Pre-load resistor provided on +3.3V; no minimum load required for chassis
Remote sense: None
Inhibit: Global output inhibit using front panel on/ standby switch
Temperature: +10°C to +50°C operating; -40°C to +70°C non-operating
Cooling: Internal 20 CFM fan for cooling power supply
EMI/RFI: FCC Part 15, subpart B class B and CISPR 22 (power supply only)

Cooling

Airflow: Front intake, rear exhaust, pressurized; chassis and power supply are cooled independently
Fans: Two 130 CFM, high pressure tube-axial, 12Vdc
Air filter: Front accessible, washable media, 30 PPI, UL 94-HF flame rating
Performance: 300 LFM per VME slot (front; free air)
Accessibility: Fans contained in front removable, plugging service module; tool accessible

Storage

Option Code S1: Embedded storage, 22HP
Peripheral Support: (1) 5.25" CD, (1) 3.5" floppy, (3) 3.5" HDD
Option Code S2: Multimedia storage, 26HP
Peripheral Support: (2) 5.25" CD, (2) 3.5"E floppy/ HDD
Power harness: (4) 4-pin IDC, AMP 1-480424-0 or equivalent; (2) 4-pin IE (mini), AMP 171822-4 or equivalent
Cooling: Upper and lower vent openings utilize subrack cooling
Accessibility: Front removable storage module, tool accessible
Additional: S1 option also includes single slot filler panel installed in front slot 10

Control and Input

Switches: Front panel on/ standby, rear AC input voltage selector for 90 – 135 or 180 – 265VAC
Power Input: Rear panel IEC320 (AC) with detachable 7' line cord provided
Circuit protection: Power supply internal breaker resets by cycling AC or front panel on/ standby switch
Accessory outlet: Rear panel outlet IEC320R provides accessory AC power; 3A 100 – 120VAC, 2A 200 – 240VAC

Monitoring

Interface: Front panel LED indicators
Functions: Power supply DC output voltage verification (90% nominal); fan speed low-tach indicator for <50% rated fan RPM or locked rotor on both fans (fan 1 upper, fan 2 lower)
Outputs: Green LED indicators for +5, +3.3, +12, -12Vdc, Fan 1 and 2; all LEDs on for good, off for fail

cont.

Environmental

Temperature: +10°C to +50°C operating; -40°C to +70°C non-operating
Shock/ Vibration: Basic transportation per ASTM 0775
Humidity: 5 – 95% non-condensing at 40°C operating, 0 – 95% non-operating
Acoustic: < 58 dBa (1 meter)

Agency Compliance **

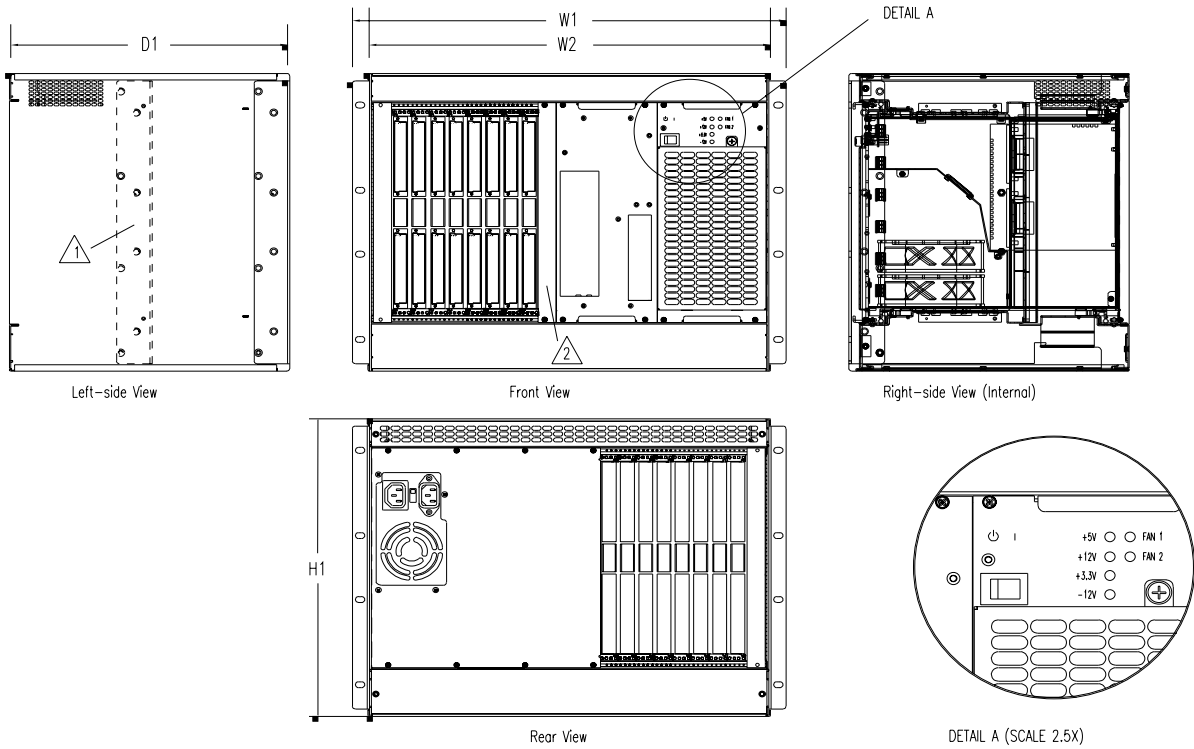
Designed to meet or exceed the following:

Safety: UL 1950 *Third Edition*, CAN/CSA-C22.2 No. 950-95 *Third Edition*
Emissions: *** See notes in ordering section

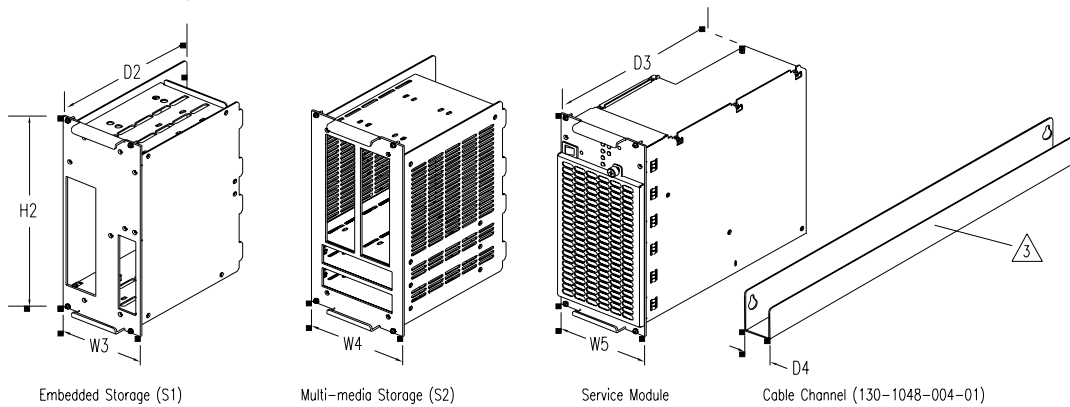
Warranty

1 year limited warranty

Main Assembly:



Sub-assemblies and Options:



Dimensions:		
D1: 12.28" (312 mm)	W1: 19.00" (483 mm)	H1: 13.98" (355 mm, 8U)
D2: 8.26" (209 mm)	W2: 17.64" (448 mm)	H2: 10.32" (262 mm)
D3: 11.0" (279 mm)	W3: 4.41" (112 mm)	
D4: 1.50" (38 mm)	W4: 5.21" (132 mm)	
	W5: 4.79" (122 mm)	

- Notes:**
- ▲ Rack flange alternate mid-mount location
 - ▲ Filler panel not provided with S2 option
 - ▲ Mounts through lower from EIA holes

Ordering Information

The System 31 as shipped includes chassis, backplane, power supply, storage, and monitoring, and is available in the following standard configurations:

Part number	Description
531-6000-F30-00	Tracewell S31, VME64X, 8-SL, 300W, embedded storage (S1)
531-6000-F31-00	Tracewell S31, VME64X, 8-SL, 300W, multimedia storage (S1)

Accessories

130-1048-004-01	Cable shelf; mounts to chassis front flanges using 10-32 rack screws
014-6001-001-OP	Shielded single-slot filler panel, 6U X 4T; installs in vacant slots
110-1171-099-01	Subrack air block, single slot; snaps into a vacant slot to block airflow

Notes:

- * Additional power supply options including 48VDC input available. Consult factory for more details.
- ** EMC compliance information is available for the power supply only.
- *** As an option, Tracewell Systems can evaluate agency compliance for the customer's specific integrated product. Consult factory for more details.


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